

ABSTRACT OF THE DISCLOSURE

For real-time communication between a number of network subscribers in a communication system using Ethernet physics, the slave units are synchronized to the master unit in that each slave unit is clocked via a respective timer with a predetermined overall cycle time, which timer is set cyclically by the reception of respective slave-specific synchronization information which is determined by the master unit. In this case, each timer in a slave unit automatically starts a new cycle once the predetermined overall cycle time has elapsed, even in the absence of the respective synchronization information. Access control for the transmission mode and reception mode between the network subscribers is provided using a timeslot access method.